



Supplementary Material

Biogenic Synthesis of Silver-Core Selenium-Shell Nanoparticles Using *Ocimum tenuiflorum* L.: Response Surface Methodology-Based Optimization and Biological Activity

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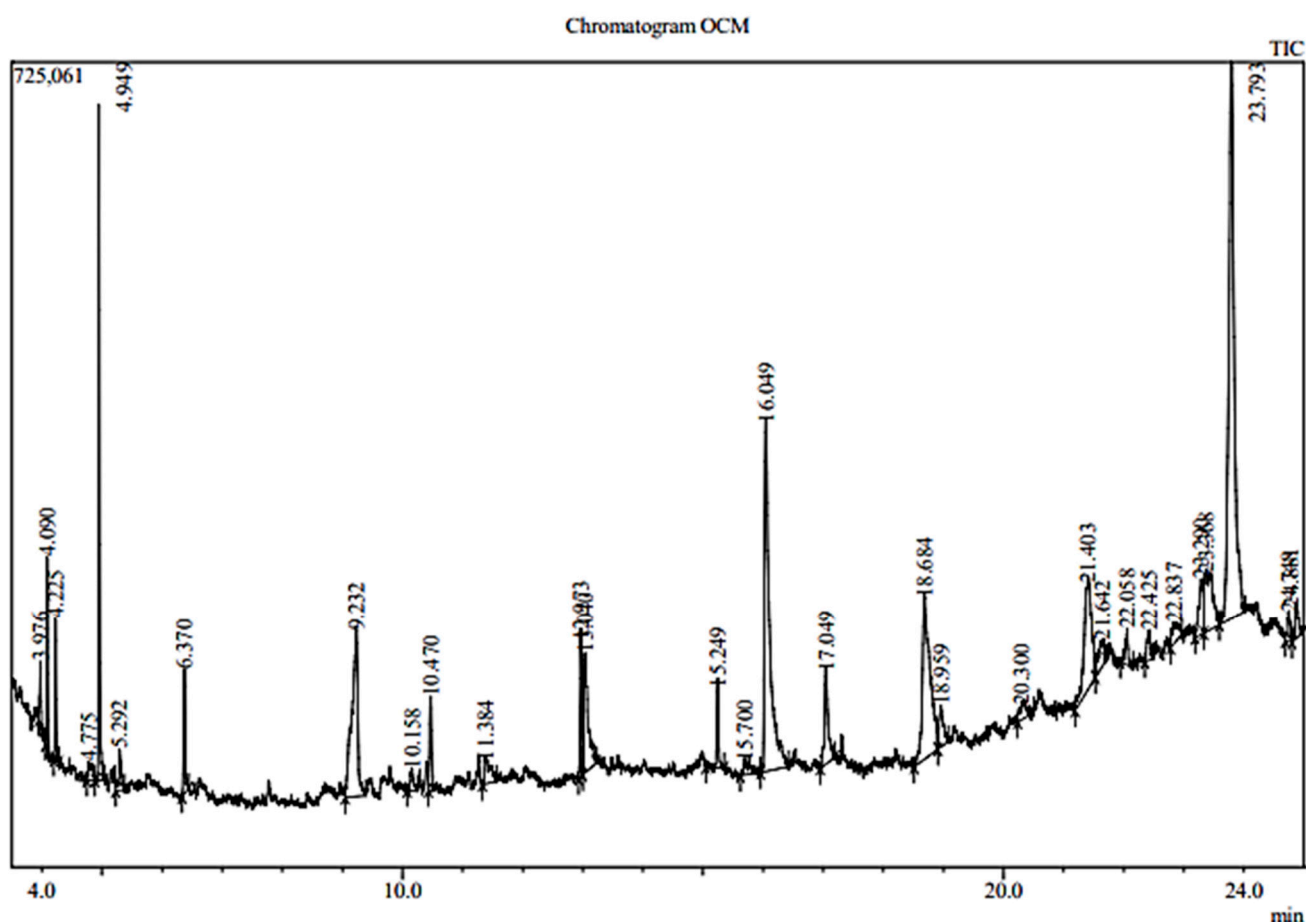


Figure S1. GCMS chromatogram of phytoconstituents of *Ocimum tenuiflorum* inflorescence aqueous extract.

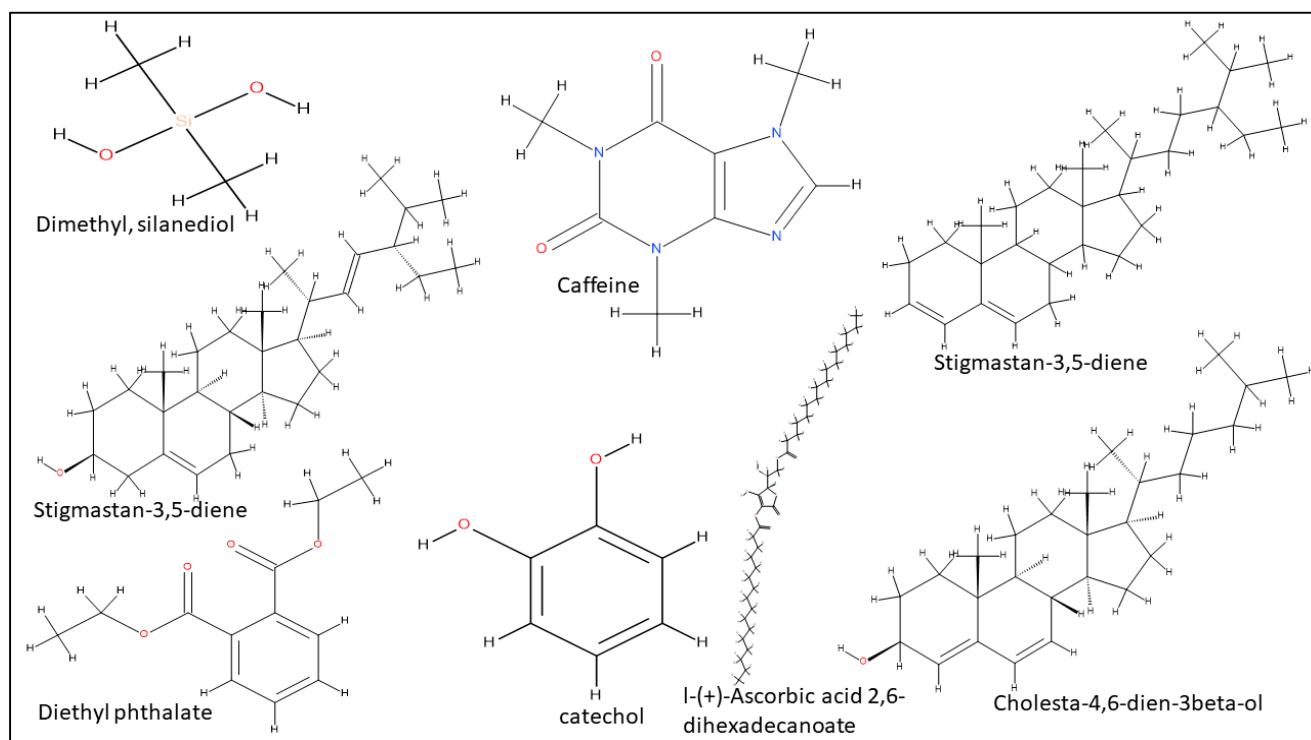


Figure S2. 2-Dimensional structure of tentatively identified compounds from *Ocimum tenuiflorum* inflorescence aqueous extract.

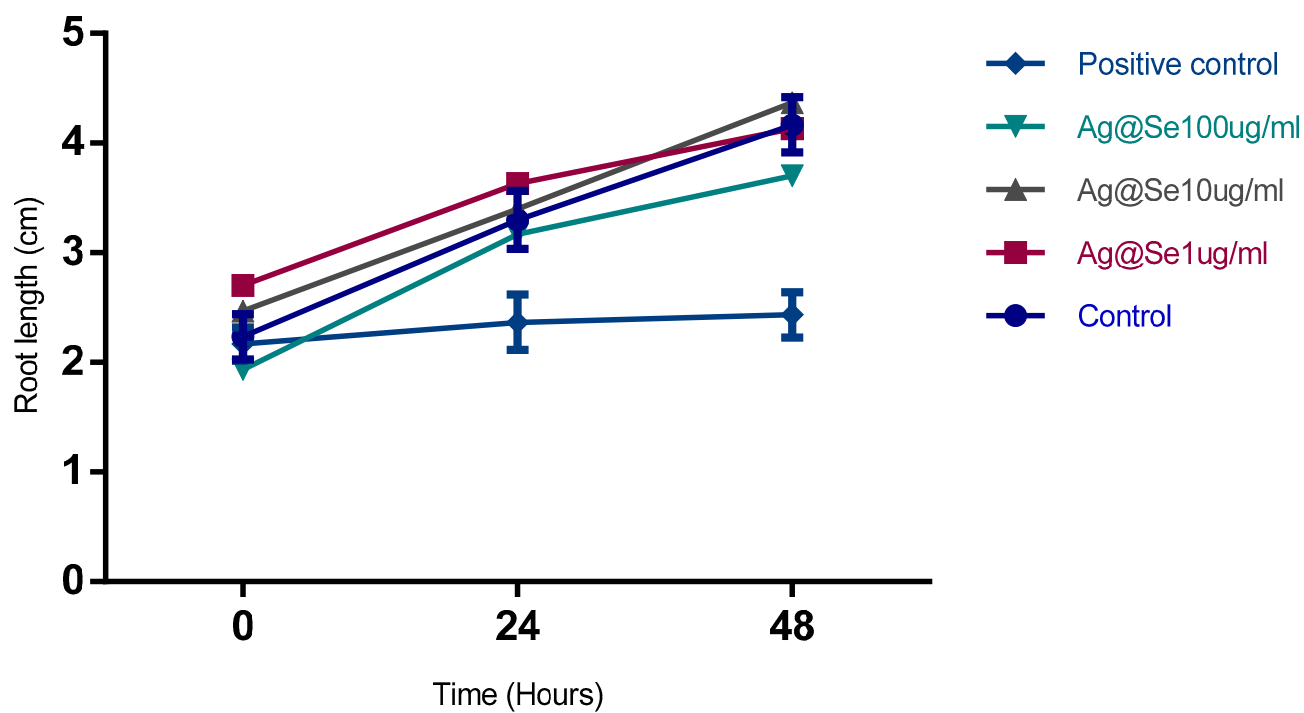


Figure S3. Mean root length of *Allium cepa* exposed to Ag@Se nanoparticles for 48 hours.

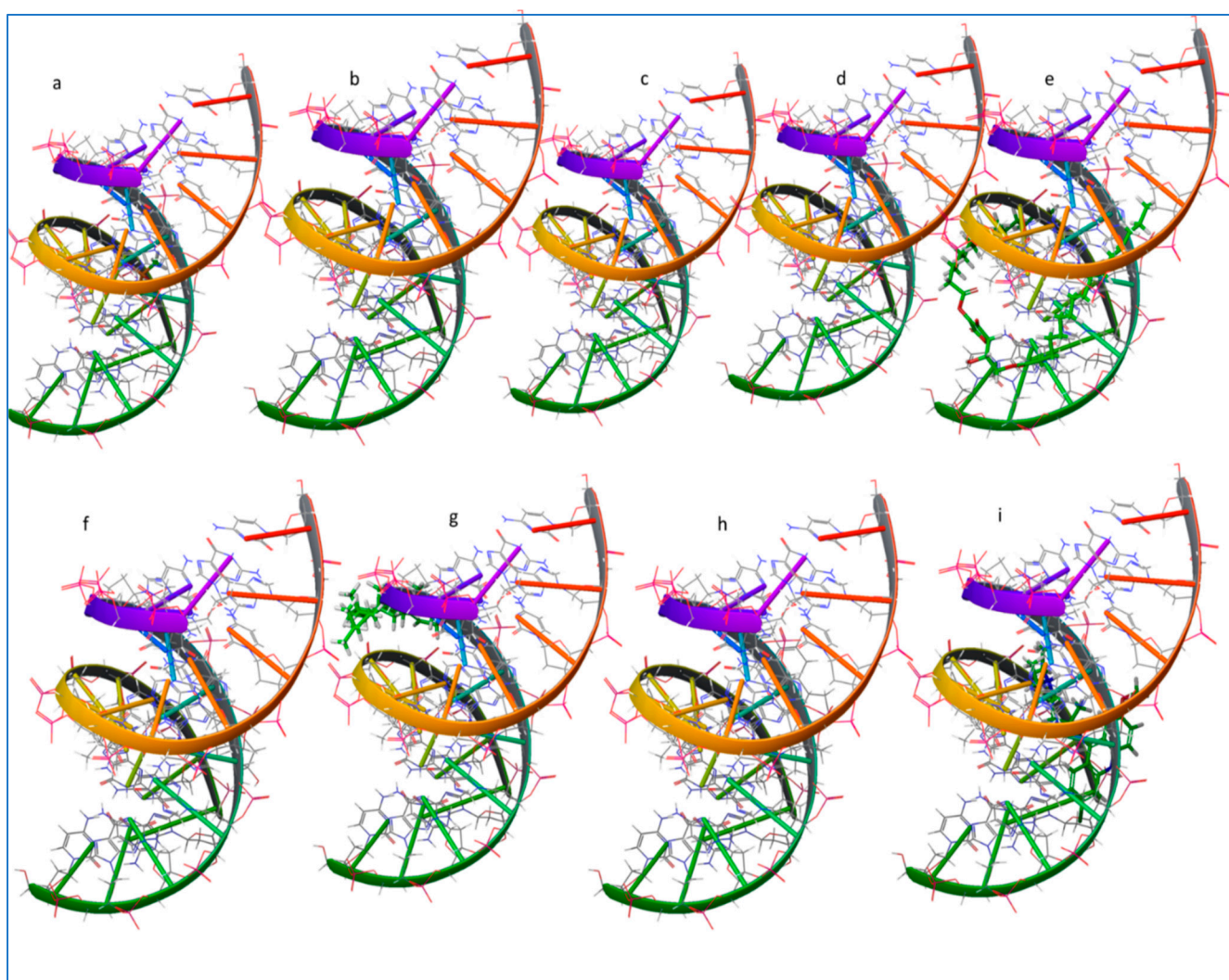


Figure S4. 3-Dimensional ligand interaction diagram of dimethyl silanediol (a), catechol (b), diethyl phthalate (c), caffeine (d), l-(+)-ascorbic acid 2,6-dihexadecanoate (e), stigmasterol (f), cholesta-4,6-dien-3beta-ol (g) stigmasteran-3,5-diene (h) and quinacrine (i) with B-DNA.

Supplementary Table S1. Analysis of variance values and model parameters showing the effect of the amount of extract and temperature on zeta potential, hydrodynamic size and nanoparticle concentration.

Zeta potential					
Source	DF	Adj SS	Adj MS	F-Value	P-Value
Model	5	132.320	26.4640	4.16	0.045
Linear	2	17.020	8.5099	1.34	0.322
EXTRACT	1	0.035	0.0345	0.01	0.943
TEMPERATURE	1	16.985	16.9853	2.67	0.146
Square	2	23.140	11.5702	1.82	0.231
EXTRACT*EXTRACT	1	14.027	14.0271	2.20	0.181
TEMPERATURE*TEMPERATURE	1	12.121	12.1210	1.90	0.210
2-Way Interaction	1	92.160	92.1600	14.48	0.007
EXTRACT*TEMPERATURE	1	92.160	92.1600	14.48	0.007
Error	7	44.552	6.3646		
Lack-of-Fit	3	14.220	4.7401	0.63	0.636
Pure Error	4	30.332	7.5830		

Total	12	176.872			
Model summary	R ² = 74.81% , R ² (adj)= 56.82%				
Hydrodynamic size					
Source	DF	Adj SS	Adj MS	F-Value	P-Value
Model	5	1076.38	215.276	2.91	0.098
Linear	2	1054.50	527.250	7.12	0.021
EXTRACT	1	142.59	142.590	1.93	0.208
TEMPERATURE	1	911.91	911.910	12.32	0.010
Square	2	12.58	6.289	0.08	0.919
EXTRACT*EXTRACT	1	7.63	7.633	0.10	0.758
TEMPERATURE*TEMPERATURE	1	6.58	6.579	0.09	0.774
2-Way Interaction	1	9.30	9.303	0.13	0.733
EXTRACT*TEMPERATURE	1	9.30	9.303	0.13	0.733
Error	7	518.20	74.029		
Lack-of-Fit	3	475.86	158.618	14.98	0.012
Pure Error	4	42.35	10.587		
Total	12	1594.58			
Model summary	R ² = 67.50% , R ² (adj)= 44.29%				
Concentration					
Source	DF	Adj SS	Adj MS	F-Value	P-Value
Model	5	89.2926	17.8585	35.14	0.000
Linear	2	83.4795	41.7398	82.13	0.000
EXTRACT	1	7.6414	7.6414	15.04	0.006
TEMPERATURE	1	75.8382	75.8382	149.23	0.000
Square	2	3.8601	1.9300	3.80	0.076
EXTRACT*EXTRACT	1	3.3138	3.3138	6.52	0.038
TEMPERATURE*TEMPERATURE	1	0.2454	0.2454	0.48	0.510
2-Way Interaction	1	1.9530	1.9530	3.84	0.091
EXTRACT*TEMPERATURE	1	1.9530	1.9530	3.84	0.091
Error	7	3.5574	0.5082		
Lack-of-Fit	3	3.4808	1.1603	60.57	0.001
Pure Error	4	0.0766	0.0192		
Total	12	92.8500			
Model summary	R ² = 96.17% , R ² (adj)= 93.43%				